

REMARKS

Claims 1-24 are pending in the application. Favorable reconsideration of the application, as amended, is respectfully requested.

I. ALLOWABLE SUBJECT MATTER

Applicant acknowledges with appreciation the noted allowability of claims 5-7 and 17-19 subject to being amended to overcome the indefiniteness rejection. For reasons discussed more fully below, applicant respectfully submits that the claims are not indefinite and therefore allowable upon being amended to independent form.

II. DUPLICATE CLAIMS

Claim 4 is objected to initially as being substantially duplicative of claim 3. Applicant respectfully submits that claim 4 is not substantially duplicative of claim 3 for at least the following reasons.

Claim 3 calls for a third pulse for forming (at least) **one of** a leading portion of the recording mark and a trailing portion of the recording mark. This is to be contrasted with claim 4 which refers to the third pulse as forming a leading portion of the recording mark **and** a trailing portion of the recording mark. In other words, claim 3 requires only that at least one of the leading portion and the trailing portion be formed by the third pulse. On the other hand, claim 4 requires that **both** the leading portion and the trailing portion be formed by the third pulse. Thus, claim 4 is more narrow than claim 3, and hence not substantially duplicative.

III. REJECTION OF CLAIMS 5-7, 11, 17-19 AND 23 UNDER 35 USC §112, 2nd ¶

Claims 5-7, 11, 17-19 and 23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant respectfully traverses the rejection for at least the following reasons.

Regarding claims 5, 6 and 7, the Examiner indicates that the phrase " $\alpha(v)$ denotes a function of the linear velocity" is vague because the function is not completely

expressed. The Examiner notes that it is unknown with respect to some un-specified variables.

Applicant respectfully submits that it is not relevant that the function $\alpha(v)$ may be a function of some un-specified variables, so long as $\alpha(v)$ is a function of the linear velocity at least. Applicant is entitled to claim the invention as broadly as the prior art permits. The claims require that " $\alpha(v)$ denotes a function of the linear velocity". Whether or not $\alpha(v)$ is a function of other variables does not render the claim indefinite or inoperative.

More specifically, the present application describes that the first power coefficient $\alpha(v)$ and the second power coefficient $\beta(v)$ depend on the recording linear velocity. For example, the greater the recording linear velocity is, the greater the values of $\alpha(v)$ and $\beta(v)$ become (see, e.g., Figs. 3, 6 and their corresponding description; page 22, lines 28-32; and page 41, lines 17-21). Therefore, the relevant part of the expressions $\alpha(v)$ and $\beta(v)$ in the broadest sense relates to linear velocity only, and the inventions defined by pending claims 5-7 are definite and it is sufficient to described them simply as functions of linear velocity.

Regarding claims 17-19 and 23, similar comments apply as compared to claims 5-7, with respect to the phrase " $\beta(v)$ denotes a function of the linear velocity".

Regarding claims 11 and 23, the Examiner states that the recitation " $\alpha(v)$ is recorded in the area" in claim 11 is vague because " $\alpha(v)$ " denotes a relationship which cannot be recorded in the form of marks and spaces. Specifically, it is asserted that marks and spaces in the recording area are formed by laser power;/pulse but not a relationship. The Examiner asserts a simply argument with respect to claim 23 and the expression " $\beta(v)$ ".

From claim 11, the Examiner infers that the marks and spaces are formed by the relationship. However, claim 11 simply does not describe that marks and spaces are formed by a relationship, and merely describes that "... $\alpha(v)$..." is recorded into an area.

It would be clear to one skilled in the art that it would be a laser, not a relationship, that records an expression into an area in the form of marks and spaces.

Furthermore, $\alpha(v)$ and $\beta(v)$ describe relationships that are represented by data. Like any other data, it is possible to record data presenting the relationships $\alpha(v)$ and $\beta(v)$ onto an area, in the form of marks and spaces on a recordable medium, as is well known to those skilled in the art (e.g., recording data representing an equation on a CD; see page 30, lines 14-26 and Figs. 2B, 3, 5B of the specification). This is similar to an equation (relationship) in an electronic file (e.g., an Excel document) which is recorded on a medium in the form of "1's" and "0's", or marks and spaces.

Accordingly, applicants respectfully submit that the claims are definite and the rejection should be withdrawn.

IV. REJECTION OF CLAIMS 1-4, 8-16 AND 20-24 UNDER 35 USC §102(b)

Claims 1-4, 8-16 and 20-24 stand rejected under 35 USC §102(b) based on Toda et al. Applicant respectfully requests withdrawal of this rejection for at least the following reasons.

Claim 1 recites, *inter alia*, a step of determining a power level of the first pulse in accordance with the linear velocity and a power level of the second pulse. Toda et al. does not teach or suggest such feature. Claims 13, 22 and 24 recite similar features.

In particular, Toda et al. simply recites determining the power level change amount of a pulse according to an expression $w2 = (1-P^2)*w1$, where $w1$ and $w2$ represent recording power change amounts for different pulses, and P represents the power level of an auxiliary pulse (see Fig. 9 and Col. 20, lines 8-55 of Toda et al.).

Hence, it can be seen that Toda et al. only determines power level change amounts using power level of a pulse P , and power level changes amount $w1$, and does not recite:

- (1) determining a power level of the first pulse,

- (2) determining a power level of a first pulse using linear velocity, or
- (3) the specific relationship wherein the power level of a first pulse is determined in accordance with linear velocity and a power level of the second pulse.

In rejecting the claims, the Examiner relies on Column 18, lines 60-65 and Column 31, lines 45 and 46 of Toda et al. However, Column 18, lines 60-65 of Toda et al. merely describe an equation for determining the maximum temperature of a recording pulse; while Column 31, lines 45 and 46 of Toda et al. simply describes changing the edge adjustment (which is performed by setting the pulse length, as described below), and changing the recording linear velocity. Therefore, it can be easily seen that neither of these sections describes the invention defined by claims 1 and 13, which determines a power level of the first pulse in accordance with the linear velocity and a power level of the second pulse.

Additionally, Toda et al. is concerned with a device for adjusting laser power and edge adjustment by setting the pulse lengths of second and subsequent pulse trains, which are set so that at least one pulse train corresponds to the minimum change length (see Column 14, lines 47-62 of Toda et al.). Therefore, it can be easily seen that Toda et al. merely sets the pulse lengths of the second and subsequent pulse trains to control laser power, and does not describe the above feature of claims 1 and 13, which determines the power level of the first pulse in accordance with the linear velocity and a power level of the second pulse (see Column 15, lines 29-40 of Toda et al.).

Advantageously, the aforementioned feature allows the formation of a recording mark having an even mark width, by determining the power level of pulses (the first pulse), depending on recording linear velocity and the power level of the predetermined pulses (the second pulse), without depending solely on the recording linear velocity. (See, e.g., page 2, lines 22-28; and page 3, lines 2-10 of the present application).

In the absence of the recited features of claims 1, 13, 22, 24 and the claims which depend therefrom, withdrawal of the rejection is respectfully requested.

V. CONCLUSION

Accordingly, all claims 1-24 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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